WHAT IS CLAIMED IS:

1. A surface position detecting method wherein an object having a region with a pattern structure formed thereon is relatively scanned relative to surface position detecting means and wherein surface position at plural detection points in the region is detected by use of the surface position detecting means, said method comprising the steps of:

detecting an error in the detection by the surface position detecting means, with respect to each of the detection points, which error may result from a difference in pattern structure among the detection points;

detecting, in synchronism with relative position of the object and the surface position detecting means, the surface position at each of the detection points by use of the surface position detecting means; and

correcting the detected surface position on the basis of the error.

2. A method according to Claim 1, wherein said surface position detecting means includes light projecting means for projecting light obliquely on to the object and an accumulation type sensor for receiving reflection light from the object, and wherein said surface position detecting step includes detecting the surface position on the basis of the state of the reflection light.

3. A method according to Claim 2, wherein said surface position detecting step includes resetting the accumulation start timing of the sensor when the object and the surface position detecting means are placed in a predetermined relative position.

4. A method according to Claim 2, wherein said surface position detecting step includes driving the sensor and a scan control system for relatively scanning the object and the surface position detecting system, at the same clock.

5. A method according to Claim 1, wherein when the surface position detection is to be done to plural objects having the same pattern structure, the error detection is made with respect to a first one or ones of the objects.

6. A surface position detecting system having surface position detecting means including light projecting means for projecting light obliquely on to a detection point and light receiving means for receiving reflection light from the detection point, wherein, while an object having a region with a pattern structure that is relatively scanned relative to said surface position detecting means, a surface position at plural points within the region is detected, said surface position detecting system comprising:

optimum value means for projecting, before the surface position detection, light from said light projecting means to each of the plural detection points and for receiving, with said light receiving means, reflection light from the point, said optimum value detecting means detecting and memorizing an optimum value of a gain of said light receiving means or a drive current for said light projecting means with respect to each detection point, on the basis of a light reception signal of said light receiving means; and

setting means for setting an optimum value for a drive current for said light projecting means or a gain of said light receiving means with respect to each of the detection points, for the surface position detection.

7. A system according to Claim 6, wherein said optimum value detecting means includes calculating means for receiving reflection light from each detecting point while holding the drive current for the light projecting means and the gain of said light receiving means fixed in the state having been set before start of the detection, and for calculating an optimum value on the basis of the drive current, the gain and a light reception signal.

8. A system according to Claim 6, wherein said optimum value detecting means detects an optimum value while scanning the drive current for the light projecting means and the gain of the light receiving means with respect to each of the detection points.

9. A system according to Claim 6, wherein the object has plural regions with the same pattern structure and wherein said optimum value detecting means detects an optimum value on the basis of one or some of the plural regions.

10. A system according to Claim 6, wherein said optimum value detecting means detects an optimum value while relatively scanning the object and said surface position detecting means relative to each other.

11. A system according to Claim 10, further comprising discriminating means for discriminating whether a detected optimum value is within a tolerable range, wherein the optimum value detection is repeated when the result of discrimination is negative.

12. A system according to Claim 6, wherein said light receiving means includes a one-dimensional CCD sensor and wherein said setting means sets an optimum value for each detection point and then resets the CCD sensor and starts the surface position detection at that detection point.

13. A surface position detecting method wherein surface position detecting means having light projecting means for projecting light obliquely on to a detection point and light receiving means for receiving reflection light from the detection point is used and wherein, while relatively scanning an object having a region with a pattern structure relative to the surface position detecting means, a surface position with respect to plural detection points within the region is detected, said method comprising the steps of:

projecting, before the surface position detection, light to each of the plural detection points and receiving, with the light receiving means, reflection light therefrom, and detecting and memorizing an optimum value of a drive current for the light projecting means or a gain of the light receiving means with respect to each detection point, on the basis of a light reception signal of the light receiving means; and

performing the surface position detection while setting the drive current for the light projecting means or the gain of the light receiving means at the memorized optimum value, with respect to each of the detection points.

14. A surface position detecting system for detecting a surface position of a substrate, said system comprising:

a plurality of sensors for measuring surface position at plural locations on the substrate, while relatively scanning the substrate;

discriminating means for discriminating and memorizing, beforehand, effectiveness/ineffectiveness of each sensor at each measurement point during scanning measurement, on the basis of information related to the substrate processing; and

calculating means for selecting, during scan measurement, one or those of the sensors of effective measured value on the basis of the discrimination information and for calculating the surface information of the substrate on the basis of measurement output of the one or those sensors.

15. A surface position detecting method wherein a plurality of sensors for measuring surface position of a substrate at plural locations while relatively scanning the substrate are used to detect a surface position corresponding to the measurement locations on the substrate, said method comprising the steps of:

discriminating, beforehand, effectiveness/ineffectiveness of a measured value at each measurement location by a corresponding sensor during the scan measurement, on the basis of information related to the substrate processing;

switching, during the scan measurement, sensors to be used for the measurement, dynamically, on the basis of the information of discrimination; and

calculating the surface information of the substrate on the basis of measurement output of the switched sensor or sensors.

16. An exposure method wherein a pattern of an original and a slit are projected on to a substrate through a projection optical system, wherein the original and the substrate are relatively scanned relative to the projection optical system in a direction perpendicular to a lengthwise direction of the slit whereby the pattern of the original is transferred on to the substrate, and wherein a plurality of sensors for measuring surface position of the substrate at plural locations are used to detect surface position corresponding to the measurement locations on the substrate, said method comprising the steps of:

discriminating, beforehand, effectiveness/ineffectiveness of a measured value of each of the measurement points of the sensors during the scan measurement, on the basis of information related to the substrate processing;

switching, during the scan measurement, sensors to be used for the measurement, on the basis of the information of discrimination;

calculating the surface information of the substrate on the basis of a measured output of the switched sensor or sensors; and

determining, on the basis of the information of discrimination, the order of shot processing so that, with regard to a shot with respect to which the number of effective sensors changes along the scan direction within that shot, the scan is done in a direction from a larger effective sensor number side to a smaller effective sensor number side.

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